

For the control specimens, it is evident that the onset of corrosion is much later than in the bath and chamber environments. It is also clear that even at the end of the test program the amount of total corrosion of the control specimens was very little in comparison with the other environments, as was expected. All specimens display small amounts of corrosion, however there are several with initial chloride contents that display significantly more accumulated corrosion as compared to the others: these are 0.5%, 1.5%, and 3.0%. It is not clear why the 1.0% and 2.0% specimens display almost the same cumulative corrosion as the 0.0% specimens. In Set #1 of the control specimens (see Appendix B), on the other hand, the 0.0%, 0.5%, and 1.0% specimens follow the same pattern of cumulative corrosion, while the 1.5%, 2.0%, and 3.0% specimens have significantly higher cumulative corrosion. The difference in the effect of the initial chloride content may be explained as follows:

- The levels of corrosion may be too low for non-accelerated corrosion, and therefore no real pattern of behavior for various chloride contents may exist after about one year.
- The resolution for this method of measurement may not be detailed enough to accurately detect corrosion at lower levels.
- Continued testing on these bars may be necessary to show any trends if they do exist.

It can, however, be concluded that different chloride levels do affect the onset of corrosion and can speed up the corrosion process based on these two sets of specimens.

The cumulative corrosion graphs for both the bath and the chamber specimens, on the other hand, exhibit significant levels of corrosion in comparison with the control specimens. This was expected due to the severe nature of the accelerated testing environments. The graphs shown above indicate that the corrosion inhibitor products are more effective in slowing the corrosion process than if no corrosion inhibitor was used. Graphs for every specimen for total corrosion over time can be found in Appendix B. For many of these graphs, it may not be differentiable as to which product(s) performed the best. Furthermore, there are anomalies where it is unclear whether the products even outperformed the control specimens. Furthermore, some of the graphs, especially those of the bath specimens, display negative cumulative corrosion. These negative values may be explained as follows:

- The reference bar is corroding more severely than the test bar, thus reversing the corrosion current and displaying a negative value (West et al. 2002).
- There is no macrocell developed between the reference bar and the test bar.
- The test bar is corroding, but the macrocell has developed only within the test bar itself.
- The test bar is corroding, but a microcell of corrosion has developed on the test bar.